

PAStimes

Phoenix Astronomical Society
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PHOENIX ASTRONOMICAL SOCIETY — ESTABLISHED 1948

Chet Schuler to Speak at Apr 4 Meeting

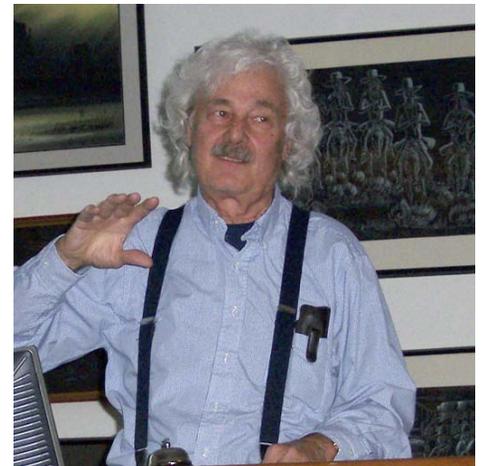
By Terri, Event Coordinator

For the April 4th PAS meeting, we have an awesome guest speaker who is so very knowledgeable on Filters. Chet Schuler will be the Guest Speaker and he writes: "My presentation is: A Filter to Separate Visual Filters "Wheat from Chaff." It will concentrate on helping to select the best useful filters for observing different astro objects."

We would love to see you attend this meeting in LS 201 on the PVCC Main Campus. Doors open at 7pm. Meeting begins 7:30pm with a few brief announcements and then the Guest Speaker takes the

floor. It is requested that you bring a snack to share. Bottled water is provided by President Bruce. Should you wish for something other than bottled water, there are vending machines on campus.

We will be having the Magazine Swap, and the Book Swap at the back of the room on the snack table. The Snack Fund box will be collecting your extra change to help pay for part of the Pizza Party in May. So, donate a little change, today. Bring the whole family & a friend or two. We expect a huge turnout, so arrive early enough to get a good seat. See you there! ***



March 7 PAS Meeting

By Terri, Event Coordinator

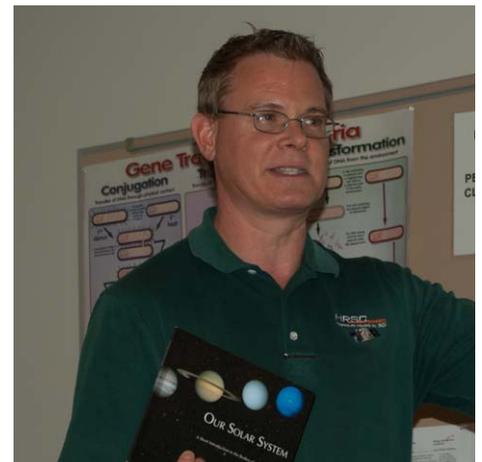
Due to the Meteor event over Russia a couple weeks prior to this PAS meeting, our scheduled guest speaker, Melissa Morris, was unable to keep her scheduled presentation date with PAS. So, she hunted frantically to find a replacement guest speaker. I thought that was very nice of her. I will reschedule Melissa for another presentation date. She found David Williams, who is always a wonderful guest speaker and welcome at PAS!

So, we opened the meeting with a few brief announcements. Terri talked about the Book Swap (see separate article in this issue), and about the Magazine Swap (see March issue on page 2), and she announced the next 2 Meeting of the Minds that are happening (Mar 28 & Apr 25, please attend), and she thanked everyone for bringing plastic bags (900 needed for event at Rancho Gabriela on May 7 - see article in this issue), and of course, she announced

the Snack Fund. Many thanks to everyone who donated to the Snack Fund at this meeting. She also apologized for forgetting to bring the plates and napkins this meeting.

Then we turned to Dave Hellman who had a few announcements. Mar 28 was a Ham Operators meeting. Here's some details about a possible guest speaker on the subject, in the forums: <http://www.pasaz.org/forums/showthread.php?t=572>. Apr 6, Sat, 9am in the parking lot of PVCC, meeting to go to Devry to take the Ham Operators class and exam. Jenny is driving and you must be there by 8:30. Contact Dave by email if you need more details. His info is in this issue on page 2. And he also mentioned that the Astro Deck at Black Mountain Campus, the construction of it, is being pushed back 2 years due to budget constraints.

Then we turned the floor to Chris Johnson who announced a few things. Just over



a year ago, Chris was offering and is now offering again, to open his observatory viewing site to PAS Members. Its a darker sky site than Estrella Observatory and Mike's home in Carefree. They say it is

See Mar 7 Meeting on page 6

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April Upcoming PAS Events

By Terri, Event Coordinator

(PAS Events below, are listed from beginning of this month, to next PAS meeting)

Apr 4: PAS Meeting with Guest Speaker (see back page for speaker line-up) 7pm to 10pm PVCC Main Campus LS-201. Bring a snack to share. Bring a friend! Everyone welcome!

Apr 6: Estrella Observatory (EOSP) (Private). Potluck at 5:30. Observing 7:30pm. RSVP is with Yves or Terri for this event. Sign up for Potluck & bring your scope!

Apr 6: Dark Sky Antennas Star Party (Private) Event begins at sundown and goes to dawn. RSVP is with Eric for this event. Bring your own everything. Star Party Etiquette is required.

Apr 11: Black Mountain Campus (BMC) Public Star Party 7pm to 10pm. RSVP is with Terri. Bring everyone you know! Black Mountain campus of PVCC is located at 60th Street and Carefree Hwy, S.W. corner. Awesome dark sky location!

Apr 12: (Private) DBG Adults Star Party 7pm to 9pm.

Apr 13: Dark Sky Observing Session for PAS Members Only, plus Night Sky Training Session (see additional article in March issue page 3 about this event) at Mike's home in Carefree. Potluck is 5pm. Observing & other events start about 6pm. RSVP is required. Sign up for the potluck.

Apr 14: Free Telescope Workshop at Bookmans 3:30 to 5:30pm. Bookmans is at 19th Ave & Northern, N.W. Corner. We meet in the musical instrument section, step in door, look slightly to your left. RSVP is required with Terri Events@pasaz.org. When you RSVP, mention the type of scope you are seeking assistance with so that we may match you up to a teacher who can help you. This is also a good class to attend to get ideas on what type of scope you should purchase.

Apr 18: Public Star Party at ASU West 7:30 to 9:30pm. Public RSVP is with Paul. PAS Members are asked to RSVP with Terri. Set up is on top of dirt hill at East end of campus at 6:30pm.

Apr 19: (Private) School Star Party. PAS Members RSVP to attend.

Apr 20: Public Star Party at Mike's home in Carefree. RSVP is with Mike for this event. Sign up for potluck. We are celebrating Astronomy Day and watching the Lyrids Meteor Shower. Everyone Welcome! Parking is limited, so arrive early. Potluck is at 5:30pm.

Apr 25: Everyone Welcome. PAS Awards Ceremony & Meeting of the Minds (Business Meeting after awards), all PAS Members should attend at PVCC Main Campus Room LS-201 7pm to 10pm.

Apr 25: CTCA (Private) 8pm to 10pm. RSVP with Joe. PAStimes Star Tour Members only.

May 2: PAS Meeting with Guest Speaker (see back page for speaker line-up) 7pm to 10pm PVCC Main Campus LS-201. Bring a snack to share. Bring a friend! Everyone welcome! This is our yearly Pizza Party. Pizza will be \$1/slice and you must RSVP your pieces (after everyone is done eating, any leftovers can be eaten by those who didn't RSVP with \$1/slice donation to PAS). Email Events@pasaz.org and tell me what kind of pizza you wish to enjoy.§

PAS Made it into Phoenix Magazine

By Terri, Event Coordinator

Many thanks to Sam Insana as he discovered that PAS was listed in the Mar 2013 Phoenix Magazine under "The Bucket List! 101 of the Most Epic, Fun, Unique, Rewarding Valley Experiences." PAS is listed on page 90, #23 and it says "Watch a Meteor Shower with Phoenix Astronomical Society. There really is "fire in the sky," and celestial spectators Phoenix Astronomical Society (pasaz.org) want you to join them in observing flaming rocks flying through space. On November 16 and 17, they'll gather to gawk at the Leonids meteor shower, which produces an average of 40 meteors per hour at peak, and on Dec 14 and 15, they'll take in the gigantic Geminids meteor shower, with its peak 60 multicolored meteors per hour. All ages are encouraged to attend the potluck viewing parties at a PAS Member's house in Carefree. No telescope required, but you must RSVP at 480-488-3031." This is verbatim WITH its typos. Just in case you think I made the mistakes as I was typing it up. So, since this is the March issue, they are announcing our upcoming Nov and Dec events. Watch out Mike, you are going to have a crowd at your events! Let's all hope for clear skies to be able to share these events with the public!§

PAS Members at Large

By Terri, Event Coordinator

Back in May of 2012, PAS held a Meeting of the Minds and elected 2 Members at Large. Dave Hellman became one of our Members at Large, and Mikey Webb became the other, as well as becoming the new PAS Host, to replace John Pulis whose health has caused him not to be able to attend the PAS Meetings anymore. We will miss John. So, in this issue of the Newsletter, we have added the Members at large to the list of PAS Officers on page 2 and removed John Pulis. I just wanted to let everyone know what we did, so that there is a record of having made this change. We have updated the info on page 2 in this issue. If you wish to read about their election into PAS, it is in the Sept 2012 issue on page 8.§

Plastic Grocery Bags Needed

By Terri, Event Coordinator

PAS is doing the Rancho Gabriela career day event again this year, on May 7. For it, we would like to provide plastic grocery bags for the kids to put their treasures in, as they make it around to the different kiosks at the school, so they don't lose their pencils, bookmarks, etc, like they did last year. So, anytime you see Terri, drop off any amount of plastic grocery bags you have at your home, that you are not needing any more. They will go to a good use and be appreciated. It is ok to exceed 900 bags. So, send them all my way. I will use them for future events, after the Rancho Gabriela event. Thanks so much in advance. Many thanks to these fine PAS Members who have already donated bags to this event: Darren Johnson, & Sam Insana, Steve Palmer, Ed & Bette Wurst. Thank you all! §

PAS Book Swap

By Terri, Event Coordinator

At the March PAS meeting, Jerry started something new. Each PAS Meeting or PAS Meeting of the Minds, we can have a PAS Book Swap. You have books you have around the house you aren't using, of topics like Astronomy, Rocketry, Science in general, physics and other topics that are related to Astronomy... why not pass them on to other PAS members who might enjoy them? So, like the Magazine Swap, written about on page 2 in the March issue of PAStimes, we would like to start a Book Swap. Go visit your bookshelf and see if you have any books you can possibly put into the Book Swap you do not have a use for any more, and then while at the Meeting, pick up a book or two to take home for the month. When you are done with it, swap it again. Sharing is some much more fun than just storing the books you don't use. The only catch is, to be fair, bring at least 1 book to swap, but take as many home as you wish from the pile. The pile will be at the back of the room, on the right side of the snack table with all the handouts. Add your book, take 2+ home. Any book that can have anything to do with Astronomy is welcome to be swapped. Come swap books with us! Jerry says when you are done with the book, you can swap it or keep it, your choice.§

Congrats to Top Public Outreach PAS Members

By Terri, Event Coordinator

PAS has winners, if there was a competition. I went through the newsletters, to look for public outreach events that everyone in PAS had done in 2012. Why? Because I needed 1 more person to give an NSN Award Pin and Certificate to. What are public Outreach events that PAS does? Bookmans Telescope Workshop, PVCC Telescope Workshop, PVCC Black Mountain Campus Star Parties, School Star Parties, Scout Star Parties, and a few other locations that were public events.

Don, William and I tied at 33 events for the year. Eric & Mike tied at 20 events. Everyone else in PAS was 11 events or less. I just found this very interesting. I didn't include events at Mike's where it was a meteor shower, because we typically do not use telescopes at those events. Therefore, in attendance, PAS Members weren't really doing public outreach. I may count these events in 2013. I didn't include any Private Dark Sky events at Mikes or Lectures, as the Dark Sky events were PAS Members only and the Lectures, again were not public outreach, unless the public attended. Just an interesting fact I thought I'd share with you.

I was given 30 NSN Pins to give away. And I was 1 pin short of having 30 names on the list. But what I did find out is that we had a lot of help from several PAS Members who I didn't even remember were at the events. So writing reviews for the newsletter with who was in attendance, really pays off if you want to earn an NSN Pin. Let's make 2013 a very public outreach year! Especially since we have the awesome comets visiting.

Now, the NSN Pins are not all people who did 3+ public outreach events in 2012. That's the stipulation from NSN. I also included those who were nominated for a pin / award. And those who were very helpful to PAS throughout the year. And some people who were chosen, are not PAS Members, so I hope they can make it to the Awards Ceremony to pick up their Pins & Certificates. Keep up the great public outreach work and keep being helpful to PAS and you are sure to get a 2013 pin at the next Awards Ceremony in April 2014.§

Orangewood School Jan 18

By Terri, Event Coordinator for PAS

It was an awesome evening for a star party. We arrived at Orangewood school and Sara Pearson, our contact there was a wonderful delight to work with. She let us in the gate to the basketball courts. Sam and Frank Insana had beat me there. We pulled our vehicles in, started to set up, noticed how dusty it was and I decided to wait for William to arrive to set up on the concrete. We had to take separate vehicles, as William Finch came straight from work to be able to make it to this event in time for set up and pizza. Then Don Boyd arrived and we all waited for the basketball courts to no longer have players practicing on them. Eric Steinberg arrived shortly after and then we started our setup. We had Don down one end of the courts, then my scope, then William's scope, then Eric at the other end of the courts. Sam was off in the field a bit. Earl DeLong joined us as an assistant and I want to thank him for all his help. He did handouts, ran between scopes to find out what objects everyone was on so we didn't duplicate objects once it became dark enough to show the fainter, more elusive items. Thank you Earl.

So, we were given little triangle boxes, individual pieces of pizza from Papa Johns. It was yummy and very appreciated. Thank you Sara. Sara had a helper at this event. He was the head athletics coach for the school. I didn't catch his name but he was super helpful as well.

As the Sun was setting, one of the classes were flying balloons made of tissue paper, launching them into the air. That was really cool to watch. I may have captured a photo or two of that. And William shot of photo of a Sun Pillar, which I will include in the PAS Photo Gallery. 5:30 pm came and we didn't see many people at first. And it was really too bright to show anything except the Moon and Jupiter. So, the Moon was the highlight of the night until Jupiter showed up. Once the North Star came into view, I took 5 minutes to align my scope. I do not believe anyone else had the chance to align their scope that night. Don did a quick alignment without the North Star, but William was swamped with people about 20 minutes before dark, and never got the chance to align. Eric had his 22 inch, and

from what I could tell, it was working perfectly and he was with people, constantly. Who wouldn't want to look through the Cannon scope!

So, After the Moon and Jupiter, I went to the Orion Nebula and just stayed on it the rest of the night. My alignment was good, but there was some drift, so every so often I had to move Orion back into view. I also did Q & A, and gave away about ¼ of the prizes I had brought to the event. The temperatures were decent. Once the Sun went down, it started getting chilly so I put on a light jacket and so did William. Then, about 6:30 or 7pm, I added another Jacket and it was fine from there on. The sky was totally clear, the location was awesomely dark for a school. Sara and her Coach friend kept the lighting off around the school. We were very pleased with the lights not being on, and how dark it was, and the thrill of all the people. Wow, had to be at least 350 people in attendance. And everyone was thrilled to see the many objects we could find that night.

I thanked Sara and the Coach, and we were thanked many times by them and we talked about doing this event again next year. This may be a good location to do view the Comet due in November. I may suggest that to Sara. Looking forward to next event at that school. Very nice people, very enthused kids, and we all had a great time and were way too busy to take a moment to align our scopes. That's the star party situation we love! Enthusiasm by the attendees. Thank you Sara, for having PAS at your school.

Sara Pearson writes: Last night was such a success for Orangewood. We really appreciate you and your members participation, everyone is so nice. With your support we can bring these real-life experiences to our students, enhancing our curriculum and the students' learning.

I am so happy you guys enjoyed your time at Orangewood. The comet in Nov. sounds awesome!! I forwarded your message on to our PTA president and the principal (I saw her this morning at Market on the Move and she said she received so much positive feedback about the night already!).

I am going to send a Thank you to the staff and would like a few details about the scopes/astronomers that were in attendance last night. I will also reach out to get teacher, parent, and student responses for your newsletter. Sara Pearson, NBC, 4th Grade Teacher, Orangewood School

Jeff Spellman writes: THANK YOU Ms. Pearson and Mr. Malloy for organizing this great family event! All of the Orangewood teachers who created interactive displays, The Phoenix Astronomical Society for bringing out their cool telescopes and for their expertise, Our parent volunteers, Sunnyslope and Washington High Schools' National Honor Society, Our concession team: 3rd grade, 4th grade, band and your PTA. We love families to be involved at Orangewood and the response we saw Friday evening was awesome... families learning and having fun, all at the same time. Jeff Spellman, Orangewood School PTA.

Earl DeLong writes: This was the first time the club has held an event at this location. It was a beautiful evening, having warmed up from the chilly event Tuesday at the Black Mountain campus (brrrrrrrrr!). We all enjoyed another superb Arizona sunset with a sun pillar visible as the sun sank in the western sky. We tried to remember Dan Heim's lecture and what caused this phenomenon (all we could remember was ice crystals).

This is a good location to have a star party. We had 6 scopes set up in the basketball court area. We had a good turnout of students and guests. Everyone was appreciative of the views through our telescopes and us sharing our knowledge and love of the night sky. One guest personally thanked me and commented that she would look up more often.

The school staff prepared well for the event with activities inside also. I noticed the toilet paper solar system displayed in one of the hallways. The school staff was very friendly and attentive to our needs. I look forward to another event at Orangewood School. §

ASU West Star Party Apr 18

By Terri, Event Coordinator

We will be assisting Paul Schmidtke again this Spring with an ASU West Star Party. PAS Members are asked to join in the fun, with or without a telescope. Please RSVP with me Events@pasaz.org to attend. This event happens at ASU West and we will be up on top of that dirt hill at the East side of the campus from 7:30 to 9:30pm. Set up is 6:30. Would love to have you attend. ASU West is located at 47th Ave and Thunderbird Road. If you haven't been to this event in the past, this is one event we have a great turnout of public, & everyone attending is so enthusiastic. Come share in the fun! RSVP today! Bring everyone you know. §

CTCA Solar & Star Party Feb 5

By Joe Collins, CancerFighter @ CTCA WRMC & PAS Member

PAS attendees: Don Boyd, Mike Marron, and Joe Collins Volunteers: Ofelia Waters and Renee Collins. We had a combined total of eighteen CTCA patients, care-givers, and employees join us on the 5th floor garden terrace for solar viewing, and later for the SkyTour event.

Joe Collins <jcollins79@cox.net>: It was gorgeous this night at CTCA, no wind as originally forecast; only a little haze on the horizon at sunset... and it was warm! Shirt sleeve weather until 10pm when we quit for the night.... I figured out a way to do solar viewing on my telescope without a sun-spotter and I can show anyone with a Celestron SCT how to do solar alignment so you don't have to make or invest in another piece of equipment (sun viewfinder or sun-spotter), consequently, both Don and I were able to do solar viewing for this event. Folks would look in Don's scope to see the full sun view, and then come over to mine to see sunspots at higher magnification. With my scope you could actually make out the filamentary structure of the umbra around the sunspots with best focus. I showed AR1667 that has been producing some C-class flares this week.

Unfortunately, my CGEM mount developed an electrical problem, so I only had about 45min of viewing Jupiter and its

moons for the SkyTour before I had to shut down. The electrical fault repeatedly tripped my power supply circuit breaker. I tried a backup battery from Don, but it did not have enough charge left to slew the telescope. Unfortunately, the CGEM C-11 is not designed for manual pointing...it doesn't even have setting circles! Consequently, Don Boyd carried the SkyTour tonight and showed at least eight other celestial objects while Mike Marron split his time displaying meteorites downstairs in the cafeteria and upstairs on the 5th floor.

Don Boyd <dazphotog@aol.com>: I showed CTCA guests: The Pleiades, the Beehive, M31, the double cluster, ET cluster, Jupiter and its moons, the double star Almaak, and Castor (a difficult binary to split even at 115x since the stars are right on top of each other).

People- Thanks goes to Jennifer Kehren who provided plenty of copies of our handouts and meal tickets. Thanks to the CancerFighter Group for providing us meals. Thanks also deserve to go to Blas (CancerFighter/Ambassador) who sent us customers from his newcomer dinner group up to the 5th floor for stargazing.

Next time- We are looking forward to coming out again next month on Tuesday March 5th. If the weather looks to be cold

or windy, we will try out the patio area again! Some helpful Java Scripts from Sky & Telescope: NOTE: you may have to create a username & password and sign in. http://www.skyandtelescope.com/observing/objects/javascript/moon_phases Moon Phases on any date <http://www.skyandtelescope.com/observing/objects/javascript/jupiter#> Jupiter and Galilean moons simulator http://www.skyandtelescope.com/observing/objects/javascript/saturn_moons Saturn & its moons simulator <http://www.skyandtelescope.com/observing/almanac/almanacCustom?latitude=42.383&longitude=71.133&tzzone=-7&UTdate=now&UTtime=now#> Moon & Planets Almanac <http://www.skyandtelescope.com/observing/objects/javascript/mars> Mars surface profiler <http://skychart.skyandtelescope.com/skychart.php> Interactive Sky/Star Chart http://www.skyandtelescope.com/observing/objects/javascript/satellite_tracker/satelliteChooser_ISS/HST/STS Satellite tracker <http://www.skyandtelescope.com/observing/objects/javascript/3304091.html> Jupiter Red Spot transit Calculator <http://www.skyandtelescope.com/scopecalculator> Telescope Attribute Calculator§

Bookmans Telescope Workshop Mar 3

By Terri, Event Coordinator

It was a lovely Sunday afternoon. Don Boyd, William and I arrived at Bookmans. The Bookmans employees were awesome at getting us set up. We were about 20 minutes earlier than usual. So, as we got done getting set up, Tom, Suzanne, and Sam (their Son) Bradenburg arrived with their Celestron Power Seeker 80EQ. While helping them, Terry Dancer arrived with his Orion XT8 Dob. We had a great session. We answered all the questions and helped Tom understand about his scope. Then, Tom and family departed about 1.25 hours into the event, and we turned our attention to Terry. We had some great discussion, not all about telescopes. Terry stayed with us to 6:30 (an hour past the event ending time) but the conversation was awesome and interesting. We packed up and departed about 6:45pm. Very successful event. §

Ads in PAStimes

Ads in PAStimes run for a month and may be renewed on a month-by-month basis, if submitted by deadline, space permitting. Ads in PAStimes are FREE to members. All others are asked to make a small donation. Donations are to be sent to the Vice Prez who will forward them to the Treasurer.

March 7 PAS Meeting

Continued from page 1
 darker than Antenna's. His site has an observatory on it, porta potty, power, internet, warm room. You bring your own of everything else and plan to spend the night, or park away from the observing area. Watch for the dates of these events on the PAS Calendar under the listing of "CEO (Private)", which stands for Cuttin' Edge Observatory. The second announcement by Chris was that he'd like to start up the Virtual Star Parties again. These are events where by you meet at someone's home, usually Chris's home in Goodyear because you need a fast internet connection to do this, and you bring your laptop with the needed downloaded programs on it, and you hook to Chris's scope in Mayer at CEO, to do remote astrophotography. Chris then, if you get all your images that night, and there is still time, shows you how to stack them, and edit them to make an awesome END image. If there isn't time, he holds a separate class to help those who don't know how to run the stacking imaging software. These events are listed on the website as "VSP (Private)" = Virtual Star Party. You can read about both of these events in the PAS Forums at this link: <http://www.pasaz.org/forums/showthread.php?t=558> and <http://www.pasaz.org/forums/showthread.php?t=44> and

<http://www.pasaz.org/forums/showthread.php?t=322>.

Then we gave the floor to Sam Insana who announced that Phoenix Magazine has PAS with 2 upcoming events listed. See article in this issue. Chris also announced the upcoming Messier Marathon at the Antennas site. Mar 16 is the Messier Marathon held in 3 locations around Arizona. You can attend with SAC and EVAC at the Antenna's site. You can also attend at the 2 Trees site up in Cottonwood with the Sedona club - Sirius Lookers, or you can do a more private event, with Mike's house to warm up in and nap, in Carefree. Where you do your Marathon doesn't matter. What matters is how many objects you can find in one evening.

Then we turned the evening over to David Williams, one of my favorite guest speakers. His topic had to do with NASA Missions and some of the updates that have come in, as well as other interesting facts, since his last presentation to PAS in Nov 2012. David brought 2 books to raffle off. Many thanks to David. One book was named "Our Solar System" for which Bruce Wust won that raffle. By the way, the raffle tickets for an item that a guest speaker brings to the meeting to raffle off, are free. So, for attending, you may have the chance

to win the item up for raffle. The other books was about the "Dawn Mission" and Albert Tucker won that book. We had over 30 in attendance.

I wish to thank David for an awesome presentation with humor, great images, super information and we all enjoyed it. I wish to thank everyone who brought snacks and apologize one more time for forgetting the plates. I feel so bad, but it didn't stop people from snacking. You can not say that a lack of a plate will be a great way to go on a diet. It didn't work at this meeting. :) Sam Insana brought popcorn, Darlene Ahlefeld brought grapes and puffs, I saw Ed Wurst bring donuts and various cookies. I didn't see who brought the crackers, but thank you. And many thanks to President Bruce for bringing the case of water. Without water, the snacks would have been too dry to swallow. Many thanks to Mikey Webb our new PAS Host for having everyone sign in & he did a great job of welcoming the guests to the meeting. Many thanks to those who brought me their plastic bags so we can use them at the upcoming event at Rancho Gabriela. See article in this issue about bag donations. Many thanks to all who attended. I saw at this meeting about 6 new non-members, and about 7 members we have not seen in awhile. Welcome back! See you at the next PAS meeting on Apr 4§.

Bookman's Telescope Workshop Feb 10

By Terri, Event Coordinator

In attendance from PAS, for this event was Leah Spair, Earl DeLong, William & Terri Finch. We did not have the help of Don Boyd this time. But we did have the help of EVAC's Event Coordinator, Lynn Young. He was awesome! Thank you Lynn.

We had 4 RSVP's from the public. Sue Jackson brought her Bushnell 800x70 scope. William assisted her with it. We had

Robert Stacker bring his Meade ETX 60AT. And Darren Johnson (New PAS Member) brought his Celestron CPC 800XL. We had 2 walk ins. Keith brought a scope he was being lent, which was a Nextar SE5 and Lynn assisted him with that scope. Lynn had originally spent most of his time helping Darren with his really nice scope. One RSVP didn't make it, Dan A.

Maybe next time.

The afternoon went by quickly. After the Telescope Students departed with their telescopes, Lynn hung around and we talked about what PAS does, what EVAC does and compared and shared notes. It was a great event. Many thanks to Earl and Leah for assisting. We look forward to the next event!§

Orion's Hidden Treasure

By Leah Sapir

Nestled in the Orion Nebula, and lighting it up, are four small stars known as "the Trapezium". The official name of this multiple star is Theta-1 Orionis, and the four components are A, B, C and D.

Although these stars might seem "tiny" to us, since they are visible only in a telescope, they are actually powerhouses of energy, much larger than our own Sun.

Star "C" (aka Theta-1C Orionis) is the largest of the group, with 40 times the mass of the Sun. It is a type "O" star that shines at 200,000 times the Sun's luminosity. The other three stars are about 10 solar masses, and are type "B". On the scale of spectral types, "O" is the brightest, and "B" is second. The Sun is type "G", just below the midpoint of the scale. §



Your Daily Dose of Astonishment

By Diane K. Fisher

As a person vitally interested in astronomy, you probably have the Astronomy Picture of the Day website at apod.nasa.gov set as favorite link. APOD has been around since practically the beginning of the web. The first APOD appeared unannounced on June 16, 1995. It got 15 hits. The next picture appeared June 20, 1995, and the site has not taken a day off since. Now daily traffic is more like one million hits.

Obviously, someone is responsible for picking, posting, and writing the detailed descriptions for these images. Is it a whole team of people? No. Surprisingly, it is only two men, the same ones who started it and have been doing it ever since.

Robert Nemiroff and Jerry Bonnell shared an office at NASA's Goddard Space Flight Center in the early-90s, when the term "World Wide Web" was unknown, but a software program called Mosaic could connect to and display specially coded content on other computers. The office mates thought "we should do something with this."

Thus was conceived the Astronomy Picture of the Day. Now, in addition to the wildly popular English version, over 25 mirror websites in other languages are maintained independently by volunteers.

(See http://apod.nasa.gov/apod/lib/about_apod.html for links). An archive of every APOD ever published is at <http://apod.nasa.gov/apod/archivepix.html>. Dr. Nemiroff also maintains a discussion website at <http://asterisk.apod.com/>.

But how does it get done? Do these guys even have day jobs?

Dr. Nemiroff has since moved to Michigan Technological University in Houghton, Michigan, where he is professor of astrophysics, both teaching and doing research. Dr. Bonnell is still with NASA, an astrophysicist with the Compton Gamma Ray Observatory Science Support Center at Goddard. APOD is only a very small part of their responsibilities. They do not collaborate, but rather divide up the calendar, and each picks the image, writes the description, and includes the links for the days on his own list. The files are queued up for posting by a "robot" each day.

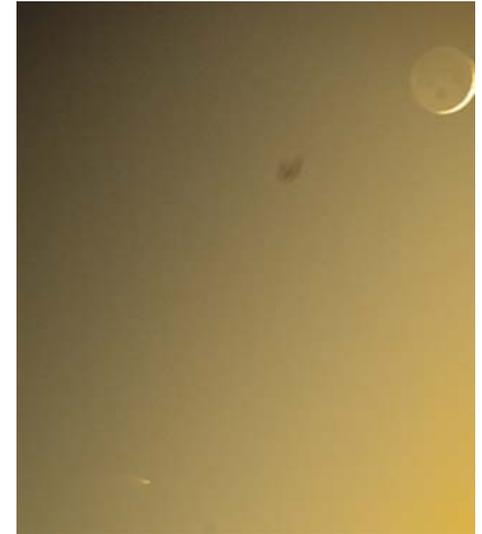
They use the same tools they used at the beginning: Raw HTML code written using the vi text editor in Linux. This simple format has now become such a part of the brand that they would upset all the people and websites and mobile apps that link

to their feed if they were to change anything at this point.

Where do they find the images? Candidates are volunteered from large and small observatories, space telescopes (like the Hubble and Spitzer), and independent astronomers and astro-photographers. The good doctors receive ten images for every one they publish on APOD. But, as Dr. Nemiroff emphasizes, being picked or not picked is no reflection on the value of the image. Some of the selections are picked for their quiriness. Some are videos instead of images. Some have nothing to do with astronomy at all, like the astonishing August 21, 2012, video of a replicating DNA molecule.

Among the many mobile apps taking advantage of the APOD feed is Space Place Prime, a NASA magazine that updates daily with the best of NASA. It's available free (in iOS only at this time) at the Apple Store.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.



Comet Panstarrs & Moon, taken at Estrella Observatory on Mar 12, 2013 by Don Boyd.

The January 20, 2013, Astronomy Picture of the Day is one that might fall into the "quirky" category. The object was found at the bottom of the sea aboard a Greek ship that sank in 80 BCE. It is an Antikythera mechanism, a mechanical computer of an accuracy thought impossible for that era. Its wheels and gears create a portable orrery of the sky that predicts star and planet locations as well as lunar and solar eclipses.

Black Mountain Campus Feb 14

By Terri, Event Coordinator + other PAS Members

This was an awesome event! If you weren't there, you should have been, you missed a good one. We had these telescope operators in attendance: Don Boyd, Eric Steinberg, Darlene Ahlefeld, Sam Insna, William Finch, Terri Finch and Frank Insana. We also had these folk in attendance, who provided scopes: Darren Johnson with a scope, & Robert Ewing (teacher at BMC, brought out a scope to use). And we had Dan A. + 3 bring a scope. Mikey Webb showed up to assist. Mike Marron was not at this event.

The evening progressed with Jupiter, Orion Nebula and other great things to show, including a sliver of a Moon. We had about 40 public RSVP's, but many more attended. I would guess that closer to 200 people were at this event, not including the Telescope Team. Many thanks to everyone who brought a scope.

During the evening, it took me until 8pm to set up. There was a table set up for

the AZSciFest people and they were doing handouts of their magazine that had all the free events listed. And after a while, about 8:30pm, they packed up and left, which meant, my table was the main attraction and lit up. So, people would come up and sign up and I'd be pulled away from what I was doing, which was setting up my scope, to help them. Not a problem, just delayed me in getting organized. Then Jack Damien found William and I and hung around to learn more, so I put him to work for a while, then I asked him if he brought his scope, and he did, so we had him set it up, which was very nice. He was very helpful and enthusiastic. Then he decided he wanted to photograph Orion Nebula through my scope from his Iphone. So, I changed eyepieces and let him try, and he got a nice photo, but

the Moon was better, so I removed the filter and let him try that one. I didn't get to show many objects, as we were busy taking photos through my scope and working with

his scope, and taking care of anyone who walked up to the PAS handout table. Many thanks to Jenny who provided the flashing lights to go at the base of the telescopes of those telescope that were set up and ready to show objects. That system worked great. It helped the public find scopes that were ready to be looked through.

It was an awesome event. Temperature-wise it was a bit chilly. The food at Bad Donkey was awesome to start the night. We had sandwiches this time, and many of the PAS members joined us in enjoying the food prior to the event. Many thanks to Bad Donkey for serving us quickly so we could get out there and set up our telescopes for the public to enjoy the view. We look forward to the next event on April 11. This was a very good way to spend Valentine's Day, with the people we care about!

Bob Ewing writes: Hi! Thanks for the wonderful observing session last night! Good group. Nice to see you guys again. §

Estrella Observatory Star Party Mar 12

By Terri, Event Coordinator

In attendance from PAS at this event was: Chris Johnson, Darren Johnson, William & Terri Finch, Darlene Ahlefeld, Sam Insana, Don Boyd, Kevin Harcey & Yves Klein (Host). Yves had invited about 25 of his friends, so we had a great turnout to view Comet Panstarrs.

The evening began with eating some really awesome food provided by Yves. Sam brought Church's Chicken, and William, Kevin and I split the cost of Streets of New York pizza. That place is expensive - \$30 for one 18" pizza. Darren brought a noodle dish and ambrosia. I didn't see what everyone else brought in the way of food but the spread was awesome. Yves provided some great treats like smoked salmon.

We all ate enough, then wandered outdoors to view the comet. The sun had just set, and the temperatures dropped. Several of us, throughout the viewing and hunting for the comet, went to our vehicles to get our jackets. Brrrrr. Don had brought his camera on a tracking tripod. Really nice set up and he got some awesome photos. If you are interested in the photos captured by

PAS members, there will be a special Comet Pan-STARRS photo album in the PAS Photo Albums on the website. Feel free to see what your fellow members have captured on film (actually digitally, but the saying is "on film"). Kevin brought his mini telescope. Chris had these most awesome binoculars he shared around. Yves had his 24" out, but not on the comet, and another scope, we estimate it was an 11" that he set up to see the comet. Darlene and I were snapping photos, but they didn't come out all that great on our little PHD (Push Here, Dummy) digital cameras.

It was an awesome night to view the comet. At first, we saw nothing. Then the sliver moon showed up, looking like a very faint Cheshire cat's smile. As the smile got brighter in the sky, in the glow of Phoenix and in the pollution, then we finally saw the comet, mostly through binoculars. At the very end, about 10 minutes, we saw it naked eye. As it got dark, several people started to leave. Darlene left around 8pm. We gathered around Yves's 24" scope. Chris was assisting in an alignment. William, Kevin and I left about 8:30 (due to having to get

up at 4am for work the next day).

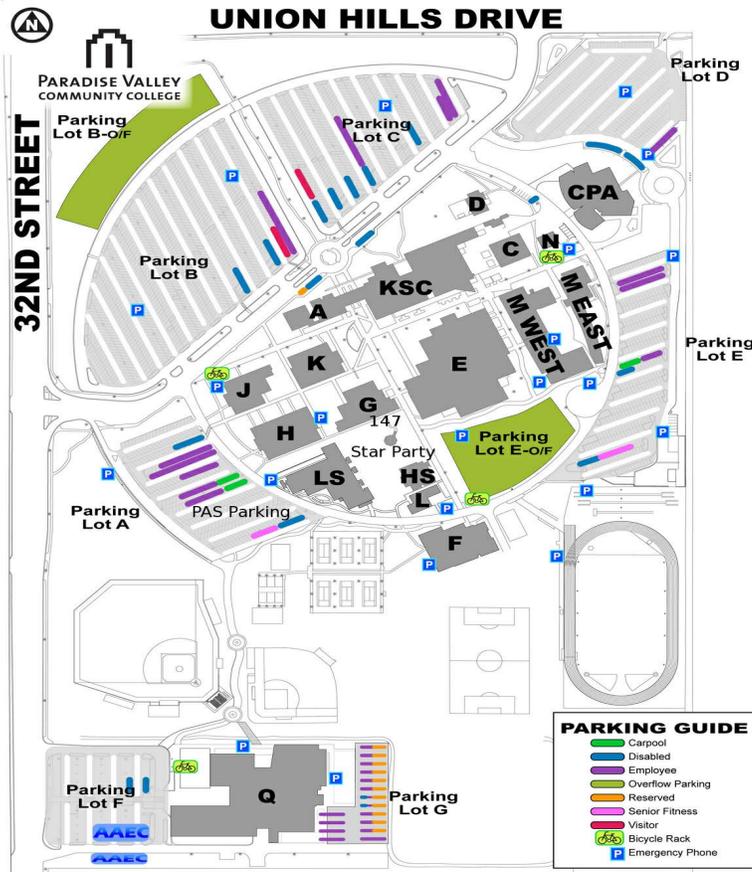
It was a most awesome event. As we were viewing the comet, Sam called his son Frank, who is up at the Grand Canyon, however Frank had his phone off and didn't get the message until the Moon and Comet had set for the night. Also, while we were there, I was texting with Rod Sutter who was taking 53 photos of the Comet during the time we were viewing it. I hope to have his photos added to the photo gallery so everyone may enjoy them, as well. 5 PAS Members who RSVP'd, didn't show up.

Many, many thanks to Yves for hosting this awesome party. And thanks to all who attended this event, brought food, and shared the experience with us. Yves and I are setting up our next event at his observatory. Watch for the announcement and we will see you there!

Yves writes: I hope you all had a great time at the Astronomy party and got a chance to see Pan STARRS in the binoculars or telescope. Thank you for coming and making the event so much fun with your presence. §

Map of PVCC Main Location

18401 N. 32nd Street | Phoenix, AZ 85032



Map of PVCC Black Mountain

34250 N. 60th Street | Scottsdale, AZ 85266



April 2013

See page 2 for more details

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4 PAS Meeting 7-10pm	5	6 Estrella Obs (Private/ Antennas)
7	8	9	10	11 BMC Public Star Party	12 DBG	13 Carefree Star Party (Private)
14 Telescope Workshop	15	16	17	18 ASU West Public Star Party	19 School (Private)	20 Carefree Public Star Party
21	22	23	24	25 PAS Awards Ceremony/ CTCA (Private)	26	27
28	29	30				

Don Boyd
PAStimes Editor
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To:

2013 PAS GUEST SPEAKER LINE-UP

By Terri, Event Coordinator Events@pasaz.org

Do you have an idea for a Guest Speaker? Email me the details.

May 2: Paul Wieland "Space is not just a vacuum."

Sep 5: Members Night

Oct 3: Rick Tejera "Beyond M42 - What to look for after you found all the easy stuff"

PAS is incorporated in the state of Arizona as a non-profit, scientific and educational organization. Our newsletter PAStimes is published monthly from September to May and distributed by US PS and the Internet. All Issues are available for download on our website www.pasaz.org Ads for astronomy equipment are provided as a courtesy to sellers and buyers, and do not constitute any endorsement by PAS. All Photos by Don Boyd unless otherwise credited. All articles and photos are copyright their authors or PAStimes.

What's Up For April

By Rod Sutter, PAS Past President

Name	Date	Rise	Set
Mercury	04-15-12	05:07	17:03
Venus	04-15-12	06:16	19:17
Mars	04-15-12	06:02	18:58
Jupiter	04-15-12	08:40	22:48
Saturn	04-15-12	19:50	06:54
Uranus	04-15-12	05:18	17:38
Neptune	04-15-12	03:45	14:53
Pluto	04-15-12	00:35	10:50

Planets in bold are visible during evening hours.

April 15 2012

Sunrise: 05:58

Sunset: 18:59



Q3: April 2



New: April 10



Q1: April 18



Full: April 25